

CLAIMS

1. A resin tube-equipped quick connector for connecting a fuel-transporting resin tube to a mating pipe, comprising a connector body, a retainer and a seal member; characterized in that:

the connector body has a generally tubular shape as a whole, and has a socket-like retainer holding portion at one axial side thereof, and also has at the other side thereof a press-fitting portion which is press-fitted into the interior of the resin tube from one end thereof;

the retainer is a member for being held in the retainer holding portion, and is engaged with a convex or concave pipe-side engagement portion, formed on an outer peripheral surface of the mating pipe and spaced from an axial insertion-side end thereof, so as to fix the inserted mating pipe in the axial direction;

the seal member is mounted within the connector body at an inner region thereof disposed closer to the press-fitting portion than the retainer holding portion is disposed, and the seal member is brought into contact with an outer peripheral surface of an insertion end portion of the inserted mating pipe disposed closer to the distal end of the mating pipe than the pipe-side engagement portion is disposed, thereby forming an air-tight seal between the insertion end portion and an inner

surface of the connector body; and

a press-fit undergoing portion of the resin tube into which the press-fitting portion is to be press-fitted is beforehand expanded in tube diameter prior to the press-fitting, and the press-fitting portion is press-fitted in the tube diameter-expanded press-fit undergoing portion to be integrated therewith in a withdrawal-preventing condition.

2. The resin tube-equipped quick connector as claimed in claim 1, characterized in that the retainer is elastically deformable radially, and includes a retainer-side retaining engagement portion which can be fitted to a body-side retaining engagement portion, formed at the retainer holding portion of the connector body, from a radially-inward side to be retained and fixed in the axial direction, and at least one of an inner peripheral cam surface for elastically expanding the retainer when inserting the mating pipe into the retainer and an outer peripheral cam surface for elastically reducing the diameter of the retainer when inserting the retainer into the retainer holding portion.

3. The resin tube-equipped quick connector as claimed in claim 1 or 2, characterized in that the resin tube is a small-diameter one having an inner diameter of not larger than 5 mm.

4. The resin tube-equipped quick connector as claimed in any one of claims 1 to 3, characterized in that a protector is fitted on the resin tube to cover an outer peripheral surface of the resin tube.

5. The resin tube-equipped quick connector as claimed in any one of claims 1 to 4, characterized in that the resin tube has such a structure that a plurality of layers are layered together in the radial direction, and the layer on the inner surface of the resin tube is formed by a resin layer which is more excellent in gasoline resistance than the layer on the outside thereof.